INDIA'S BIG CANAL SYSTEM.

THE MOST EXTENSIVE IRRIGATION WORKS IN THE WORLD.

Water From the Himalayan Slopes Brought to Hundreds of Thousands of Fields Along Artificial Conduits—Their Cost.

I do not remember anything that impressed me more favorably as a genuine economic enterprise, the whole world round, than the canal system of India. People go into raptures over the Taj, the Elephant Caves and other "wonders of the world" that are to be seen in India, but to me the most wonderful of all were the canals that have practically rescued the teeming millions of the peninsula from famine. By the time I reached India I had grown middling weary of sightseeing. I had already traversed the byways of sixteen different countries mingling with the people, making daily observations and taking notes, and one can get a surfeit of sightseeing as of anything else. The faculty of observation grows wearied in time, so that one no longer takes the interest in wonderful things that they really warrant. But the magnificent irrigating canals made an impression on my mind that is as vivid now as when I was standing on their banks. In no other part of the world is there to be seen anything approaching the splendid system of canals that English enterprise has given to India.

Here and there along the Grand Trunk road, its smooth kunkah bed passes over a substantial brick bridge, spanning a canal broad enough to float a schooner. The first of these canals I rode over was in the Punjab, on the road between Lahore and Amritza. Standing on the bridge there stretched away into the distance on either hand a broad avenue of luxurious vegetation, beneath which flowed silently a placid stream wider than Broadway. Straight as an arrow the aqueous avenue made a silvery streak mile beyond mile across the levels of the Bari doab, the most charming vista imaginable. It has been customary to plant the banks of the canals with trees, and to encourage the tropical vegetation of India to flourish and sustain the soil. Abundantly supplied with water, with a rich soil and tropical climate, the trees have grown to magnificent proportions, and many of the smaller canals, ditches, say twenty or thirty feet wide, are literally overarched by the vegetation, so that the water flows beneath a leafy tunnel. I have looked along these tunnels where the "masonry of the trees" was so compact that very little sunlight reached the water. A chastened twilight prevailed even at noon, and to look down the vista and see, half a mile, or a mile away, a string of dusky boatmen sculling their rude craft along the silent and shaded avenues, was a real picture.

The overarching vegetation serves the dual purpose of holding the banks firm and preventing the wholesale evaporation which would otherwise take place.

Up to the present time there has been nearly $100,000,000 spent on the canal system of India. And this sum only represents the amount spent on the main works, constructed by the Government or English companies. The old native canals, of which there were a good many in quasi-existence, and which were often utilized by the Government in digging the new ones, are not included in this estimate. Nor are the thousands of miles of small distributing canals, of which the big canals are the feeders, for these were in most cases dug by the organized efforts of the cultivators themselves.

In the province of Scinde alone there are nearly 7,000 miles of canals in actual operation, irrigating about 2,000,000 acres of soil. No country in the world is so well adapted by soil, climate, and physical geography to reap the best results from irrigating canals on a large scale as India. Vast level plains of rich alluvial soil, sloping gently over the peninsular from the Himalayas and smaller mountain chains, have for long ages been awaiting redemption at the hands of man. Some were burning wastes that lapped up the scanty annual rainfall as greedily as though it had fallen on hot iron, and with no more visible results. Others, in the track of the monsoons, afforded pasture and cultivation in ordinary seasons, but with a season of drought came famine that swept away millions of lives.

The canals have put quite a new face on the matter. The magic transformation brought about by the distribution of water in Scinde, where the annual rainfall is but nine inches, a mere bagatelle to what the sun-blistered earth requires, is something marvellous. Along every ramification of the canal system one can see a fringe of green fields, immediately beyond which is the baked and sterile plain on which there is not even a blade of grass. Just as far as the water from the ditch extends there the soil revels in a wealth of intense green, yielding crop after crop almost as fast as they can be sown and reaped. But the line between that which is irrigated and that which is not is not is as sharply defined as though it were an affair of paint and canvas.

Whole districts have undergone a complete change. The now thriving city of Jacobabad stands on a plain, which, previous to the construction of the Begari Canal, was a verdureless waste, the hottest place in all India, and supposed to be quite uninhabitable. The thermometer climbs up to 145° in the shade at Jacobabad, but since the canal put life into the desert, several thousand people have made the place their home.

With this tremendous heat, rich soil, and plenty of water, vegetation grows with extraordinary rapidity. The plain, formerly barren, smooth, and shiny as a pavement, is now very much of a forest, where it is not actually under the plough. Villages have sprung up like mushrooms along the canals, date groves abound, and the whole face of the country is as different from what it was thirty years ago as night from day. So wonderful is the transformation that an old Scindi who came home after an absence of many years and found a dense forest where he had never before seen even a blade of grass, declared that the Sahibs must be gods in human guise. Henceforth the old Scindi insisted on prostrating himself, as before an idol, whenever he saw a white face.

Some of the Scinde canals are as much as 300 feet wide and twelve or fourteen feet deep. Sometimes they have been made by repairing and utilizing the dry beds of ancient streams. Every few centuries the Indus has raised its bed above the bed of the surrounding plain, and then, forsaking it, carved out another channel for its passage to the sea. The ancient raised beds of the Indus and its side channels are easily converted into irrigating canals.

Much of the Punjab would be a scorched and uninhabitable waste except for the rivers that issue from the Himalayas and spread out over it like five fingers. These rivers and the nature of the country through which they flow render irrigation of paramount importance. Many of the magnificent canals in the Punjab system that have now converted that section of India into a luxuriant garden are the old, ruined canals of former dynasties repaired and enlarged.

Many mentions of irrigating canals are found in the annals of Akbar's reign. As early as the fourteenth century Feroz Shah had a large canal dug to bring water from the mountains to Hissar and Shansie. Akbar found this canal in ruins, and passed a "canal act" ordering it to be repaired and enlarged, so that "this jungle, in which subsistence is obtained with thirst, be converted into a place of comfort, free from all evil."

In digging these old canals, however, the Mogul Emperors were, as usual, actuated chiefly for their own personal pleasures. Shah Jehan made one canal, not to irrigate the people's fields, but to supply fountains and cascades in the royal mango gardens at Lahore. When the Sikhs conquered the Punjab they also set to work and dug a canal. Still the poor ryot and his crops were considered of secondary importance, for the motive of the Sikhs was to supply the sacred tank at Amritza. One of the nawabs of Multan once made the people dig a canal so that his favorite wife could proceed to some point down country by boat.

All these capricious ventures, however, were but as a drop in the bucket compared with the system that now irrigates as large an area of soil as Illinois and Indiana. Imagine these two States ramified in all directions by canals, the principal ones aggregating thousands of miles in length, and varying in width from 40 to 300 feet. Branching off from these, other thousands of miles, with a volume of water equal to that of the Erie Canal; from these again yet other branches, and still others, smaller and more numerous, until there would not be an acre of ground without its ditch. Imagine every mile of the larger mains, and almost every mile of the smaller ones, converted into splendid watery avenues by tropic trees, and you gain some idea of the present canal system of India.

Many of the larger canals have been constructed for navigation as well as irrigation, the tolls collected from freight and passenger traffic forming one of the regular items of the annual reports. Tremendous engineering feats had to be performed at the head of some of the big canals, where the Ganges and other streams were tapped at the foot of the Himalayas. To carry the canal through certain districts the tracks of mountain torrents had to be crossed in many instances. Sometimes the torrents were diverted in other directions, and sometimes they were provided with broad channels of masonry to carry them peacefully over the bed of the canal. Monster weirs had to be built across the big rivers whence the supply of water is taken, and the canals carried across broad streams on aqueducts. The Ganges Canal crosses the Solani River on an immense aqueduct three miles long. The aqueduct consists of earthwork approaches which carry the canal across the low valley subject to overflow, and fifteen arches of masonry of fifty feet span each across the normal bed of the river. Over this aqueduct flows a stream of water two hundred feet broad and twelve deep, the ordinary volume of the Ganges Canal.

The financial results of the different systems form an instructive field of observation, as showing the vast difference in the receipts in proportion to outlay that may be obtained from enterprises of the same general character in one country. One canal system, known as the Cauvery system, in the Madras Presidency, returns 81 per cent. profit per annum on the investment, and some of the smaller canals even more than this. On the other hand, many of the systems show an annual deficit, owing to the tremendous cost of construction in difficult country and proportionately less cultivable land to supply with water. Taking the canals as a whole, however, they are very good-paying property. They afford employment to a small army of English civil engineers at large salaries, and pay the shareholders, on an average, probably as much as 10 per cent.

The most profitable canals are those which have been carried along the beds of ancient streams or old canals. While they are not such perfect specimens of engineering skill, and give less satisfaction from the standpoint of utility than the purely English enterprises, the first cost was comparatively small. Wonderful returns have sometimes been obtained on a very small outlay, a few thousand pounds spent in clearing out an old watercourse and turning a stream into it virtually creating a new district in what had before been a howling desert. A few years ago Major Minchin was appointed agent of Bhawulpore, a small native State on the Indus, during the young Nawab's minority. The Major looked the territory over, and decided to introduce water from the Indus into various old channels that traversed the State. He borrowed £15,000 at 12 per cent. and set the people to digging. By the time the Nawab reached his majority, the judicious outlay of this trifling sum had increased the revenue of Bhawulpore from £120,000 paid in grain to £190,000 paid in cash. Taken all in all, the canals are perhaps the greatest blessing that the rule of the English has brought to India. THOMAS STEVENS.

THE GREAT NEW FORTS OF FRANCE.

Revolving Turrets Undergoing Experiment at Chalons—The Eclipse Fort—Another Factor of Uncertainty in any Future Contest Between France and Germany.

From the London Times.

At the Chalons camp a second series of experiments with plated turrets has been recently undertaken. It may be recollected that in 1885 experiments with plated turrets were made in Bucharest. At that time metallic fortifications were already a question which had acquired the greatest importance. Since 1885 artillery has continued to become more and more destructive. The aim has become more certain. The pointing of the cannon is effected without the gunner requiring either to look out himself or to expose himself to view; and the discovery of new explosive substances has made shells too powerful for any existing fortifications. The fact has been so striking that in all armies there are many who have come to the conclusion that fortresses have had their day, and that the courage of the soldiers and the sagacity of the General can alone now stop the march of an army or drive it back. They quote the saying of Lord Palmerston to M. de Persigny, who had described the French soldier as "the bravest in the world." "I cannot say the same thing of our men," replied Palmerston. "All other soldiers are as brave, but they are brave a quarter of an hour longer than the others."

Those who condemn fortresses maintain that victory belongs to the last quarter of an hour, and that what is required are veteran soldiers and cool officers rather than costly and useless fortresses. The advocates of fortresses admit that in the long run the besiegers always end by defeating the besieged, but the time during which an army in an enemy's country, ill-housed, ill-fed, harassed, always on the *qui vive*, can be kept in check is of immense advantage to the invaded.

The plan of fortresses at present adopted—unknown to the public, but the divulging of which can do no harm, as it cannot remain secret—is very peculiar and quite opposed to any æsthetic or artistic conception. A fortress is henceforth composed of an immense block of concrete of incredible thickness. It will offer to the eye only a square, oval, or lozenge shape, the outside being a mere block without projections or access. It is not yet settled whether this block shall be surrounded by a trench, but all competent authorities in Europe seem to hold that one or several sheeted cannon shall move round the block, and as powder will in future be smokeless, this cannon, always in motion and escaping the enemy's aim, will fire on a fixed point. This movable sheeting will make up for the absence of trenches. At the angles of the block, moreover, if square, or elsewhere if it is round or oval, there will be sheeted reducts which will cover the base of the block and make assault impossible. Of course, the interior of the block will contain the complements of a fortress. The entrance is underground, on the side opposite that where the enemy can appear. There will be air openings in the interior, which is lit up by electricity produced on the spot or at a distance. The magazine of projectiles is in a spot inaccessible to explosions caused by shells coming from without. The stores of other ammunition and of victuals are similarly protected. The hiding places for the men, and, in short, everything that has to be under shelter, are underground, and so placed as to be quite protected from the besiegers. Electric wires, both for messages and light, as also telephones, beyond the reach of the besiegers, protect the fortress against isolation—that is to say, against abandonment and discouragement. The underground existence of the garrison may not be very lively, and it will be well to accustom as many men as possible to it; but that garrison will not exceed thirty or forty men per fortress.

A fortress thus equipped for resisting the enemy's attack and fire of course requires special means of repelling the enemy, preventing him passing, and doing him all possible mischief. These means are the plated turrets which form the second portion of the experiments at Chalons. The fortress will in general have two steel turrets, one on each side, which by their circular motion can fire in all directions. The frontier fortresses will be so arranged that their fires meet, which is easy with the wonderful range of modern cannon.

The turrets of Saint Chamont and of the Chatillon and Commentry Company have just been undergoing artillery fire. The first part of the experiments was the firing from these turrets. The second consists in their being cannonaded and shelled. The Saint Chamont turrets are real turrets of cylindrical shape with a rounded top, which gives no hold to projectiles. The Chatillon and Commentry turrets, while of cyndrical shape, are but slightly rounded at the top, the surface of about six or seven square metres being slightly convex, but nearly flat, thus giving more hold to projectiles if they are supposed not to burst immediately on contact with the cupola. The Saint Chamont turrets project 90 or 95 centimètres from the surface of the block fortress, and are thus visible to the enemy. They can be only equipped, moreover, on account of the shape of their cupola, by cannons of 155 millimètres, styled "cannons 155 short," whereas cannons "155 long," which measure 4.40 mètres, project 40 centimètres from the turret during three-quarters of the time required by the rotatory movement—that is to say, during 45 to 90 seconds for each discharge. Both the Saint Chamont and the Chatillon turrets are rotatory, showing their portholes and cannons only at the very moment of discharge. The aim is no longer taken after ocular examination, but each fortress has a plan of its entire range of fire, cut into divisions as numerous as is possible for the working of the cannon. The officer in command of the fire is stationed in an observatory inside, outside, or even, if necessary and possible, at a great distance from the fortress. He telephones to the officer inside the turret the numbered point on the plan from which the firing is to proceed. This order is transmitted to the pointer, and the cannon being placed on the point the rotation begins. This movement to the point aimed at produces an electric shock, which makes the gun go off, while the turret continues to rotate, is again charged, and, altering its aim or not, begins a fresh fire.

The Chatillon Company has made an important change in the arrangements of the turrets by adding to the rotatory movement an eclipse movement. In other words, the turret not only turns on itself, but by a counterpoise mechanism of extreme simplicity it drops down after firing. It does not then project above the ground more than fifteen centimètres, and can be easily disguised. It offers no hold on the sides, but only on the cupola, which is flatter than the Saint Chamont one. As to accuracy of fire, the general opinion, confirmed by the recent experiments, is that the eclipse turret is twice as accurate as the merely rotatory turret. With the latter the fire is never fixed, seeing that to conceal the cannons from the enemy the turret is forced to continue its movement and to come back to the point of contact where electricity causes the discharge, whereas the eclipse turret, while rotative so as to fire in all directions, disappears after firing and reappears after being charged without rotatory movement—that is to say, with the precision of fixed firing. If, for instance, the electric contact during the rotatory movement has the slightest delay the ball deviates, imperceptibly, it is true, at the starting point, but the deviation becomes comparatively considerable at the arrival point on account of the great distance. The eclipse turrets, moreover, are made of steel cast in a peculiar way, so as to be cheaper, more malleable, and consequently quite as resisting as other steel, being at the cupola 50 centimètres thick. The total weight of a steel turret is 120 to 190 tons, and it can fire every minute or every two minutes, according as steam power or manual labor is used.

What is the upshot of all this? The Germans admit that their musket is inferior to the Lebel, that the French artillery in casting, mounting, and handling is now at least equal to their own, but, as they have frontiers which will protect them, they maintain that the existing French fortifications would not stop them long. The superiority of the musket, however, and almost of the cannon, combined with other advantages possessed by the French, restores the balance. In 1870 it was just the contrary. The German musket and cannon were superior, but the French fortifications made a good stand. The Germans will shortly have improved their musket and the French their fortifications; so that the means of war of the two nations are again balanced, and thus for nobody knows how long the thrift and strength of the two neighbors will be engulfed in the bottomless abyss of military preparations.

PILOTS OF MANY HARBORS.

THE MEN OF SANDY HOOK BRAVEST OF ALL THE OCEAN CRUISERS.

North Sea Roamers Pretty Nearly as Bold—Those of Calcutta are Dudes, and Have Valets with Them—How the Malayan and Chinaman Work—Great Dangers.

Of all the hardy fraternity of men who guide the argosies of the world safely into welcome havens, none are braver or more venturesome than those who sail out of Sandy Hook in the buoyant, straight-stemmed, two-masted keel schooners called pilot boats. These men are the aristocrats of their calling. They are no hardier than their rugged and fearless brethren of the North Sea, but they subject themselves to greater dangers by their long cruises. It must be rough weather indeed that can keep the New York pilots in port. They cruise night and day, from fifty to 500 miles from Sandy Hook, in search of incoming craft. The flare of their torches lights up the wind-driven snow and sleet of winter storms, and contends with the treacherous darkness of summer fogs. They speak and board in all sorts of weather and at all seasons the iron-sided leviathans that cross the ocean in less than a week.

To the European tourist who sees them for the first time and has never read about them these pilots of the New York harbor are a revelation. The tourist, as a rule, expects to see a rough-and-ready sort of fellow in homespun, with a swaggering air and a mouth full of nautical expletives, climb up the tall, black side of the ship from the pilot boat's yawl. He sees instead a man of modest mien and good dress about whom there is little to indicate his calling, and much like the merchants and clerks to be met on Broadway. In the old days, when there were less foreign-born men in the service, our pilots indulged in the luxury of high silk hats when boarding vessels on pleasant days. They are not so fastidious nowadays and use Derbys instead. They are, as a class, prosperous; but they pay dearly for their prosperity by the most arduous sea labor. Since 1853 more than twenty-five of their boats have been run into and sunk or lost in storms. The Enchantress and the Phantom, which the pilots hereabouts think have foundered in the terrible blizzard, may be added to the list.

Before the Enchantress and the Phantom disappeared there were twenty-two New York and seven New Jersey pilot boats, owned by 133 New York and fifty New Jersey pilots. Each pilot is appointed by the Commissioners after three years' apprenticeship, part of which is spent in rowing the boat's yawl to and from vessels and part in taking care of the boat and acting as her skipper. He must pass an examination before he is allowed to try his hand at bringing in or taking out a ship. Then he serves two years on probation, and if he gets along all right he is then made a full-fledged pathfinder. The pilots who own a share in the boats—and nearly all of them do—earn a good living. Nearly all of them have a sixth interest in the boat they sail on. They are paid for their work by the foot. The charges vary according to the draught. For a ship that draws from 21 to 28 feet they get paid $4.88 a foot, and for one that draws from 6 to 13⅞ feet they get $2.78 a foot. These rates are increased 7 per cent. in winter.

Compared with our own pilots the men who take ships into Calcutta are howling swells. They wait patiently in a brig anchored about 100 miles from port until a vessel needing their services comes in. The vessel is compelled to take a pilot, and must wait for him. He is rowed away from the brig by a half dozen natives in a big yawl. He climbs up the ship's side with the assistance of his valet, a nimble native, who then looks after his master's luggage. This usually consists of as many trunks and boxes as a fashionable woman needs—or thinks she needs—at a summer resort. The Captain generally uses block and tackle to hoist the pilot's things aboard. Although he probably will get into port, through the tortuous channels of the Hoogla River, within twenty-four hours at the utmost, the pilot always has enough things to supply his needs in a voyage around the world. He sits in a luxurious chair—this is a part of his baggage—beside the skipper, and directs the course of the ship. If he wants a drink of water, and it happens to be within a few feet of him, he will, rather than disturb the Oriental calm of his spirit, summon his valet from the forward part of the ship and make him fetch the water. When he first appears on the ship he usually has on a blue uniform adorned with brass buttons. Before he gets to Garden Reach, where he leaves the ship and goes aboard the brig whence outgoing vessels take their pilots, he is arrayed in other raiment by his valet.

When this easy-going pilot is in charge of a ship's destiny, he does not move a limb if he can avoid it. All the active work of piloting is done by the leadsman. He takes soundings at frequent intervals, thus familiarizing himself with the depth and boundaries of the channels, and gaining such knowledge as will enable him himself to have several Saratoga trunks, an easy chair, and a valet some day. The Calcutta pilot is a European; generally an Englishman. He has a commission from the Government, and when he gets too old for his arduous duties he is retired on a pension. The Government mans and equips the brigs, and the pilot permits the Government to take one-half of the pilotage, which is not an inconsiderable sum. The Calcutta pilot will not board a vessel except on fine nights, and never during rough weather. Large sailing craft are always taken in tow by tugs that cruise after them, as it would be dangerous for them to ascend the river under sail. The outside brig burns a flash light at night, and a code signal of warning if the incoming ship is in danger. The brigs are manned by natives and officered by Europeans. They do no cruising. When the pilot leaves a vessel at the inside station boat she is taken care of by a "mud pilot," who is far from being a dude and has all his wardrobe on his back. He brings her to her moorings, a mile or so off shore.

In vivid contrast with the indolent life of a Calcutta pilot is the tempestuous career of the wandering storm defiers of the North Sea. There is nothing gaudy about them. They come chiefly from that nautical race of nervy blue-eyed men, famous in the past for deeds of glory on the deep, and now the mainstay of the merchant marines of the world, those blue-eyed men whose mothers brought them into life on the soil of the Scandinavian peninsula. There are also many daring English, German, and French among the roamers of the North Sea. Probably the most noteworthy of all these guides are the Norwegians. They are appointed by an officer whom the Norwegians call an Olderman, who holds his office for life and has the power of appointing and breaking pilots. He is a Board of Pilot Commissioners by himself. Usually he is a naval officer or a ship Captain who knows pretty much all that anybody can know about the water in the neighborhood where he has jurisdiction.

The *Los Skjüite*, or pilot boat of the Norwegian, is a deep, beamy, clinker-built craft, fastened with wooden rivets, sharp at both ends, and between twenty-five and thirty feet long. It is ballasted with stone, and carries the same canvas as one of our jib-and-mainsail boats. The sails are tanned brown or yellow. In the upper half of the mainsail is the boat's number in Roman numerals. Three or four men own a boat and sail her. They dispense with a yawl on pleasant days, as they can then board a vessel by going alongside. In a Norwegian pilot's life there is no period when he can take things easy. No weather is too rough for him to go cruising for vessels in his swift, uncapsizable little boat. When the wind is lashing up the white crests and the sleet or snow is cutting slanting lines across the stormy air the pilots, except the helmsman, are under hatches. The helmsman sits in the cockpit, and may be ploughing to windward under reefed sail, or dashing down the wind like a crack yacht in a race. When he sights a vessel in need of a guide he heads for her. If she is a sailing vessel she will heave to for him. He runs alongside, and one of the pilots in oilskins comes on deck and makes ready to catch the life line that is thrown to him from the vessel. He fastens it under his arms and leaps into the sea. The sailormen on the vessel pull with a will, and drag him dripping up the vessel's side to the deck. Then the pilot boat bounds away in search of other prizes.

Sometimes, when the wind is blowing with hurricane force, and the boat cannot get, without great risk of collision, within reach of the life line, she dances in before the vessel, showing the way. The North Sea pilot does not cruise more than twenty or thirty miles from port. The law compels him to help every vessel that signals him for assistance. All fishermen are liable to be called to pilot vessels in distress, but they must turn the vessel over to the regular pilots if she falls in with one. Notwithstanding the risks they run, the North Sea pilots are seldom wrecked or run down. They are paid well, but not nearly as well as our own or the English pilots.

Merchantmen that sail into the port of Shanghai are usually guided by English or other European pilots, who cruise in American and English built boats, which are used also to take stores to lighthouses and lightships and the employees of the Custom House from place to place. The Celestials who are born, live, and die on those queer little craft called sanpans take the mariner into the port of Hong Kong. The sanpan is a sharp-bowed boat with two bamboo sails that suggest a lugger. The skipper lives aboard of her with his wife and children. He cruises around the outer islands for incoming vessels, and when he sees one he steers for her and gets alongside. The vessel is not compelled to take a pilot, but her Captain does not, as a rule, think it absolutely safe to enter port without one. The sanpan man invariably asks a fee about six times as much as he expects to get. After much haggling he agrees to do the job for about $5. This will keep his family for a month. His only credentials are in the form of statements from Captains that he has shown them how to make port safely.

The pilot who most suggests the piratical being of romance is the Malay who rows or sails out in his canoe from Singapore, and, for a small consideration, directs the skipper of the trader into harbor. The young Captain of a ship recently from Singapore says he picked up while going into that port a tall, straight Malay, who could understand and speak only a few English words, but who was as bright as a new dollar, and polite enough to suit a Frenchman. He showed the Captain a crude drawing of a ship and a colored American flag, under which were a few lines from a Yankee Captain, saying that the bearer, John Thompson, was a good pilot. The Malay took the young Captain's ship in for $10, and, in order to make himself solid with the Captain, made him daily presents of cocoanuts for a week. The Malay showed drawings of other ships with German, French, and other flags over them and notes of recommendation underneath. Some of the notes alluded to the Malay as Sambo, and he indicated to the young Captain that he preferred to have the young Captain write that name in his recommendation.

Almost everybody who has crossed the Atlantic knows what kind of men the English pilots are. They are not much below our own in intelligence. They use cutters and yawls for cruising, and do not venture out as far as their Yankee brethren, but they make nearly if not quite as much money. French pilots search their coasts in three-masted luggers, stanch craft. They and their German neighbors do not court the dangers of long cruises.

HOGAN'S AWFUL DROP.

His Leap from a Balloon When Nearly Two Miles Away from the Earth.

From the St. Louis Globe-Democrat.

JACKSON, Mich., April 3.—"It is claimed by the balloonist, Baldwin, that he has dropped 5,000 feet from a balloon with a parachute. I shall drop at least 10,000 feet, and shall attempt what no other balloonist ever did. I shall drop with the chute closed, leaving it entirely to the air to open the chute."

So said Edward D. Hogan to a group of newspaper men, who had assembled this morning on a large vacant lot northwest of town to see him make his foolhardy venture. Hogan is a local aeronaut, and lives with his family at 421 Van Buren street. He was for fourteen years employed in a planing mill here, and only during the last four years has devoted himself to ballooning as a profession. He has studied the subject thoroughly, however, for many years, having from childhood taken the keenest interest and delight in the science of sailing air ships. He rigged up a workshop at his home, and there he spent every spare moment experimenting in the constructing of balloons, and on every possible occasion had made an ascension, frequently going up to considerable heights. During the past few months he has given his attention to parachutes, and on Feb. 9 last announced, as soon as the frost was out of the ground, he should ascend to an altitude of 10,000 feet and drop from the car.

"There is no use," he said, "of my attempting to do anything unless I can beat all previous records, and fall further than any living man. A few hundred feet less or a few hundred feet more will count nothing for me. I must at least double the distance."

He repeated this talk this morning when getting his car ready, and at 9:35 the balloon ascended. As the balloon left the earth one of the guy ropes holding the chute broke.

To describe this particular "chute" it is only necessary to imagine a white globe 20 feet in diameter cut through the centre; in this way you have two parachutes, the professor only having one. It contained 100 yards of stout cloth. It is not unlike a mammoth umbrella without a stick, the braces being flexible cords running down 25 feet, and fastening to an iron ring two feet in diameter. The other cords all run clear up to the seams of the "chute," so they cannot give way. This parachute was fastened to the outside of the hot-air balloon in a perpendicular form by the cord. When the balloon was at the proper height the Professor intended to take hold of the iron ring, swing clear from the balloon, depend on the air to inflate the "chute," and take his chances of reaching terra firma in safety. The balloon was inflated by 60,000 feet of hot air, balloon, parachute, and apparatus for inflating the balloon all being of Mr. Hogan's own manufacture. As he stepped in the car and gave orders for the ropes holding the balloon to the ground to be cast off, the Professor said to the correspondent, who took what the latter believed to be final leave of a daring and reckless man:

"My balloon ought to take me up two miles at least. The parachute won't inflate inside of 300 feet from the time I leave the balloon. This distance will occupy three seconds, after that I expect to come down all right inside of one minute and thirty seconds. Let her go."

At the word the ropes were cut and the monster went sailing upward.

"The chute's guy has broken," cried Hogan instantly. "I'll have to come down and start over." As soon as possible Hogan descended. "I'll go up again in an hour," he said.

The second trial was a success. The balloon shot up almost straight to a distance of fully 10,000 feet. It then settled about 400 feet and hung like a ball in the heavens. The anxious and excited crowd of people on the ground watched the balloon with bated breath. The reporters were provided with powerful glasses, and saw Hogan make ready to jump.

"He'll weaken," said some one.

"No," cried another, "he is getting out."

The chute was closed. Hogan drew it up till he reached the ropes to which he lashed himself. He did not expect the chute to open for the first 200 or 300 feet, and he was afraid he might be shaken off the bar by the rapidity of the fall unless he took the precaution to fasten himself. When he stepped on the edge of the car to spring off into space some of the spectators grew pale and sick. Surely this daring man was going to certain death.

A shout of terror goes up. Hogan has jumped. Down like a cannon ball he fell for 500 feet. The chute has not yet opened. Down it came like a gigantic elongated bird. He was falling like a meteor, and the spectators shut their eyes while still keeping their glasses elevated. Suddenly a shout goes up. The chute has caught the air. It opens like the wings of a monster eagle. Hogan's flight downward was almost stopped with a jerk. Then the chute settles down to a steady journey earthward with its passenger, and in three minutes from the time the reckless man left the balloon he landed safely in an open field some little distance from where the ascent was made.

The *Globe-Democrat* correspondent was almost the first to grasp the hand of the aeronaut.

"I lost my breath," said he, "when I shot down so fast, but I caught it again after a time. It was a great jump, wasn't it?"

Prof. Hogan was smeared with smut. He had never seen a man jump with a chute. He was much disappointed at the slow time made, expecting to come down in ninety seconds. The chute was 20 feet in diameter. Oscillation was guarded against by means of a four-inch hole in the apex. He was overwhelmed with congratulations, and is quite the hero of the hour.

Mr. Hogan came to this city eighteen years ago from Ypsilanti, where, as a boy, he made his first ascension in the summer of 1866. The man who first put ballooning into the boy's head was W. M. Clayton, who followed circuses during the summer, and made trips in hot balloons. He lived in the family with Ed all winter, and when spring came the future balloonist was as full of vistas as a boy who is to see his first circus. That summer Clayton came to Ypsilanti with a circus, and was to make the ascension, but Ed persuaded Clayton to allow him to go up instead. The matter was kept secret between the two, and when the leaky old hot-air affair sailed up in the atmosphere, Mr. and Mrs. Hogan sitting on their stoop a few rods from the scene, waved their hands at the boy, supposing he was Clayton. The next day the papers told the story, and Ed got a good thrashing, but it didn't cure him. The future balloonist then began to study and save, always declaring that so soon as he could get money enough to build and inflate a balloon he would go up. No amount of talk ever had any effect on him. He was bound to rise in the world, even if he came down hard.

He made his first ascension in May, 1880, leaving the ground hanging by his toes to a piece of gas pipe, which he called a trapeze. The balloon was up two hours and twenty minutes, landing at Stockbridge, eighteen miles north of this city. That trip made him "Prof." He has saved a snug sum, built a couple of nice houses, has a healthy bank account, and twenty hot-air balloons. He has now fallen further than any other man and escaped unharmed.

A Pretty Girl from China.

From the San Francisco Chronicle.

Ng Yee Nam is the Chinese name borne by a beautiful girl who arrived on the steamer Belgic nearly a month ago. When the steamer was released from quarantine and pretty Ng Yee was taken to the Circuit Court to arrange for proper bonds for her release on a writ of habeas corpus, she created no little sensation among the officials, attorneys, and reporters.

Instead of having a Chinese cast of countenance, Ng Yee possessed an oval face, a nose slightly Roman, large, round, dark eyes, pearly teeth, and a figure that many an American beauty would give worlds to possess. Such was Ng Yee's appearance, and her actions in court were decidedly anti-Chinese. The ordinary Chinese girl's demeanor, when among those not of her own race, is proper to a preciseness. She holds a handkerchief to her face, never smiles, and under no circumstances expresses surprise—in fact a prim maiden aunt would go into ecstacies over such a ward. But Ng Yee had no one to shake a warning finger at her; she had all the latitude possible, and took advantage of it. She peered out of the corner of her eyes at a reporter in a most bewildering way, then pouted because he was too modest to saunter over where she sat and say nice things to her. She was well up in all the artifices known by the girls of the present day, and by those thoughtless airs she wrecked her own happiness, for she will be sent back to China. Consul Bee heard about the waif, and as she lacked proper credentials he proceeded to investigate her case, as it is quite probable she was shipped to America for immoral purposes. The Consul said yesterday:

"Her case is a remarkable one, so far as I have gone. Both of her parents were not Chinese—of that I am certain. She has Portuguese blood in her veins, and her very appearance disproves the statement of Lee Kong You that the girl is his wife's sister. He says that she was born in America and that she returned to China in 1878. Who purchased her ticket to this country, and by whom she was sent, I have not learned as yet, but I will bring her to the Consulate on Friday and hear her story. She will probably be remanded."

THEY ALL HAVE THEIR SAY.

THE PARROT, THE RAVEN, AND MAN NOT THE ONLY ANIMALS THAT TALK.

All Make Use of Language, Though Ordinary Tongues or Even Volapuk Are Too Much for Them—The First Distinguishable Words of Babes, Lambs, and Calves.

From the Open Court.

The range of animal language is far greater than is generally conceived. Concentrated at first at the poles of the cell, and later at the extreme ends of the bodies of creatures of complex organization, language tended more and more to the use of sounds. After the escape of life from the water the use of a voice became almost universal, from the rough croak of a frog to the song of a thrush. The range of expression widened grandly in the quadrupeds and the birds. Necessarily incomprehensible by us, it is certain that every note and every modification of a note carries meaning between fowls and birds. The student of nature comprehends that the morning songs of birds with which they greet the break of day in summer is a wholly integral affair, differing from their evening songs as well as from the notes uttered during love making, and during the work of nest building. There are also distinct shower songs, welcoming the refreshings of nature. There are songs of victory, songs of love, and equally the notes of querulous dissatisfaction, as well as cries of anger and pain. These notes evidently are understood, not merely within the limits of a single species, but the robin comprehends his neighbors. This is certain, because not seldom the tribes make common cause of joy or of battle. By common consent the robin has the earliest hour of dawn for his roundelay—other birds either keeping silent or following in an undertone. After his song is ended the catbird begins, and takes the hour mainly to himself—wherever he is an undisturbed dweller.

My horse I find instantly comprehends a sound of caution, one of reproach, another for speed, and one of approbation. The dog is specially capable in this direction; but still greater is the power of a cat, a power seldom allowed by us to show itself. I have no doubt that a cat really gets the drift of what we say to her, and at times our full meaning. "In the way of language," says *Popular Science*, "monkeys manifest their passions, fears, desires, by cries and gestures emphasized by significant accents. The alphabets of some of the Melanesian races are not much richer. Some monkeys have a noisy and explosive laughter analogous to ours." Abbott insists that birds not only sing but talk, and that their song bears the same relation to speech as our own. "Crows have twenty-seven distinct cries or utterances, each readily distinguishable from the others. These utterances, as in all birds, are only expressed when the bird is occupied, showing that birds sing from pleasure and talk from necessity." He adds concerning fishes: "I have been led to believe that certain sounds made by fishes are really vocal efforts, and that their utterance is for the purpose of expressing an idea."

All animals can talk if you but deign to learn their language—not ask their tongues to crook to yours. Tones are speech, not artificial words that bear your language as a barrow wheels your corn.

But we must not neglect the fact that desire to communicate, before its vent in vocalization, not only developed in a remarkable range of gesture-language, but emotion expressed itself in colors and changes of color. We shall make a mistake if we attribute the coloring of birds, insects, and animals too largely to the survival of those that best imitated or most resembled surrounding objects. Colors are a gamut, expressing pride, love, anger, fear, and every possible emotion. They arise in the first instance from desire and effort at expression, and are direct and immediate. As such they are language. They become in large degree hereditary, and their display automatic. Birds in love have a love color; in anger they have the anger color. Mimicry, incidental or intentional, applies color to purposes of safety; but there is little probability that any color ever arose from a purpose at concealment.

It is more and more clear to an intelligent observer that langage is absolutely universal wherever there is sensation. All life more or less is intercommunicative. Animals in our company, if dealt with as capable of development, soon adapt their sounds to our requirements. I have owned a horse that could call me with distinct sounds of caution, and others of affection, and still others indicating more abstruse ideas to my accustomed ear. On one occasion she distinctly informed me of trouble in the stables—calling to me when 100 rods away, and expressing the utmost satisfaction when I reached the yard. The cows had broken down a door and let loose some calves.

Are we not equally certain that some animals, if they had the third convolution and the genial tubercle, would now develop speech, and that right rapidly? I never feel so sad as when standing beside my noble, large-brained horse. By all possible means he endeavors to communicate with me. Marvellously well he succeeds too, but his language is yet one of gestures and simple sounds. Assent, disapproval, joy, antipathy, desire, and ambition, as well as personal affection, are in the range of the horse's language. Imagine with what speed this creature would progress if ever the genial tubercle were possible. However, man's position was secured not by means of language alone, but by means of freed hands and an erect posture. The limits to language correlate to the limits in the power of toolmaking. The horse needs no extended speech without hands to increase his relation to things.

In 1874 Prof. E. D. Cope, our eminent biologist and paleontologist, said: "When we find the common ancestor of all the hoofed mammals we shall find it to be pentadactyle, plantigrade, bunodont; that is, five-toed, a walker on the flat foot, and possessed of tubercular molar teeth." In 1881 he announced that such a type was actually in our possession—a type that abounded in North America during the early eocene era, five or more millions of years ago. To this typical group, called condylarthra, he traced the lemurs or half-apes, which stand as parents of the true apes; and from whom biology traces as most probable the branch that developed manward, while the diverging apes were arrested in development short of a free hand and a frontal brain. Later deductions and reconstruction show that to the condylarthra can be traced the origin of the herbivorous and carnivorous mammals of the miocene and recent eras, including the horse, hog, antelope, elephant, rhinoceros, the lion, tiger, wolf, and bear. In other words, in a common ancestral type of the eocene converge all these hoofed mammals; and from that, now discovered, fossil type, by diverging lines they moved out toward the forms now existing. These lines of divergence are many of them quite completely reconstructed from our discoveries in fossils—as in the case of the horse, of which we have the one-toed, the two-toed, the three-toed, and the four-toed, with the fifth rudimentary. This affinity of the hoofed mammals is not purely structural.

The energy of nature moves ever on lines of desire. The primal desire of food led to the habit of one creature devouring another. The struggle for existence is a struggle to eat, and not to be eaten. This, in the condylartura family, ultimated in some taking to their toes for safety; others to teeth and claws; others to horns and heels. The least able, otherwise, took to climbing. This was a movement toward a free hand. The hand led to tools. Tools increased property and concentred energy on the effort to converse. Language became more and more, in that line, vocally articulated. But the co-related stocks of this family must have, all of them, been possessed not only of family structural traits, but psychical traits or affinities. To investigate these will not be altogether difficult. A little study will show that this entire condylarthra family have a kinship of gesture and vocal languages; and that it is still possible for us to comprehend each other; as it is not possible outside of such lines of descent. My horse modulates her tones with almost human inflection. In the sheep fold I hear from all sides ba ba, while near by the calves are crying ma ma. I am at least surprised to find that babes also begin life with ba ba and ma ma. My boy does not at first call me pa pa, but ba ba. Even after his sounds have become cerebral he continues for some time these inherited utterances. Through a large range of mammals this elemental speech is common. The lower races of savages cry mama, when terrified or suffering. They are babes grown up. On the other hand the hog family, and the bear, have only a guttural range of sounds, combined with a click. Primitive races are characterized by this very guttural click. The Hottentots get their name from it; and Miss Bird says of the Ainos that their language is peculiar for a perpetual clicking, and for a soft and plaintive m.

It is very clear that the study of language carries us far back of primitive man; indeed, that with primitive man, in his language of sounds and signs, we are also studying the great mammal world below. This line of study is full of possible rich results. We have, I do not doubt, still psychical affinities with the whole mammal group, and these are expressed in language. At the same time we have common hatred and horror for creatures of unaffiliated types, expressed also in our language.

Judging by the simpler races, it is probable that the first forms of articulation were more or less musical, consisting in the main of imitations of sounds commonly heard. Certain it is that the primitive languages do not lack in rhythm. The vocal organs of the Negritic stock are possessed of more melody than articulation. The languages of genuine savages must be distinguished from those of primitive races, such as the Aino and Dravidic, as being the products of degeneration.

Exceedingly interesting is the process of language development in a babe. No study in anthropology is more fertile. The babe's first cries are purely instinctive, and therefore purely animal. Its consonants are m and b (labials and liquids—used with the open vowels. It does not use the genial tubercle, nor for many weeks the frontal brain. Its second list of sounds move further back, and are g, goo, gutturals of the simplest sort. This g sound, with its natural associate, k, becomes the well-known basis of all primitive languages—the clicking or glucking of Ainos and Hottentots. Next observe the babe as it watches your mouth as it laughs at your cooing and your baby talk. It finally sets its own articulating organs in motion and imitates you. The consequence soon is the simple use of the frontal brain and the genial tubercle. The goo goo is followed by ah ah and ehe ehe, and soon after by modulation. These are not only the first use of truly human organs, but the first cerebrated sounds, as distinct from instinctive and inherited utterances. The steps toward a highly complex cerebrated language are thereafter rapidly taken.

We have to bear in mind that the babe organically follows historic evolution, and is an epitome of past progress. So also in his speech he moves on and over the pathway of the past, and reviews it all. An intelligent child expresses approbation and disapprobation by the same sounds that are used by adult monkeys. The savage hardly uses cerebrated sounds at all. The refinement of languages has ever consisted in eliminating the animal inheritance. The child's use of gestures is also inherited. He does not need to learn to use his hands; only to secure muscular strength to direct them. His play is at first purely animal frolic, rejoicing in shouts and shrieks that later he does not find necessary to his enjoyment. His laughing and crying can only be understood as language, as they surely are also in adults. The evolution of laughter would be a delightful branch of our topic, but a theme too much by itself. It is enough to note in passing that not only do animals laugh, but they smile. Laughter is even not uncommon among fowls. I have owned a cock that had a most distinct cachinnation.

JAGGERS'S BEAR.

He was Good Once, but Treated with Indignity, he Wanders Forth a Terror with One Ear.

"Hi! look out thar! He's comin' right to'ard ye, Cap!" yelled old Bolivar.

"Yew-ick! yew-ick! yow-o-o-o-o!" sang the dogs in excited chorus.

Swash! Crash! The dense laurels swayed and bent and snapped like trees in a hurricane. The centre of the great disturbance advanced rapidly toward the edge of the thicket. The cause of the unwonted agitation promised to soon reveal itself in the open, not more than twenty feet from where Capt. Bodine stood, with his rifle cocked and ready to welcome it.

"That's Jaggers's b'ar, sure!" he said. "No other b'ar th't ever lived k'd thrash them laurels down like that!"

Ten years before, Friendship Jaggers, a bark teamster for the Kettle Creek tannery, had found a three-weeks-old bear cub in a hollow stump in the woods. The baby bear's mother was absent, and Jaggers transferred the cub from the stump to one of his feed baskets and took it home with him. The cub thrived in captivity, and grew to be a great pet. Up to the time he was a year old his disposition was so mild that children played with him as they would with an old house dog, and he had never shown the slightest inclination to be ugly. He had the run of the whole clearing, and seemed to be entirely ignorant of the fact that his natural home was among the rocks and in the swamps. One day a drunken teamster was teasing the bear, and the latter struck him playfully with one paw on the hand, scratching it slightly. That angered the teamster, and, drawing his knife, he cut one of the bear's ears off close to the head. The terrible beating that the teamster received at the hands of Friendship Jaggers was small recompense for the bear's mutilation, especially as from that moment the animal's disposition was changed. He became so ugly that no one dared to approach him, and a few days later he disappeared. As if to wreak vengeance for the indignity that had been put upon him by the cutting off of his ear, that bear became the scourge of the neighborhood. He systematically raided sheepfolds and pastures, pigsties, cornfields, and gardens. Time and time again the bear was seen on his marauding excursions, always being identified by his single ear. Children who had played with him when he was a good bear met him on their way to and from school, but he followed them with no playful look in his eyes. The bear was at last given the name of Old One Ear. He became the terror of the region. He defied all traps and snares that were set and laid for his destruction. The best hunters were outwitted. A price was placed on his head. Other bears were caught in traps, or run to earth by hunter and dog, but One Ear still lived and marauded. Sometimes he would be reported as raiding in one part of this region, and at once the whole community would rise up in arms and seek him there to destroy him; but even while they beat the woods and trailed them with dogs, word would come that the dreaded One Ear was on the rampage in an entirely different part of the country. His position in the region was that of a four-footed brigand, living in some inaccessible mountain fastness, and issuing forth at his pleasure to rob and plunder.

Bolivar Green, known all through the Kettle Creek country as "Old Bolivar," and Capt. Jim Bodine were among the famous bear hunters whom the cunning old One Ear had frequently outwitted; so, when the news came that the scourge of the clearings had been seen lurking on the borders of Big Laurel Swamp, Old Bolivar and the Captain resolved to make one more effort to bag the shaggy terror.

"He's gittin' old, now," said Capt. Bodine. "Mebby we'll be enough for him."

So Old Bolivar had summoned his four noted bear dogs, Nigger, Maje, Young Cobbler, and Tige, and they had hunted in the swamp but a short time when the critical moment arrived that caused Capt. Bodine to shout:

"That's Jaggers's b'ar, sure! No other b'ar that ever lived k'd thrash them laurels down like that!"

Suddenly the baying of the dogs changed to sharp, quick barking. For a moment the crashing in the laurels ceased. Then it was renewed with increased violence, mingled with the yelps and howls of the dogs, and furious cries and snarling of the bear. The angry brute had paused in his threshing of a path for himself out of the thicket. The dogs had overtaken him and attacked him in the rear. Thus harassed, he had turned to defend himself. Then the battle was on. Dogs and bear were struggling in the laurels not more than a hundred feet in from the edge of the thicket, but the tangled bushes were so thick that the contending foes were hidden from view, and the progress of the fight could only be followed by the violent swaying of the tangled bushes, as the battle waged to the right and left among them. Ten rods further in the laurels Old Bolivar was fighting his way through the dense growth toward the scene of the noisy conflict, shouting words of encouragement and command to his dogs.

"Neck him, Tige!" he cried. "Hang to him, Maje! That's a good boy, Nigger!"

Capt. Bodine ran to and fro along the edge of the thicket, raising on his toes, and craning his neck in vain efforts to get a sight of at least enough of the bear to lodge a ball in, and adding excited cries of his own to the general tumult. At intervals during the combat a peculiar yelp from a dog, sharp and full of agony, sounded above the angry monotony of the combined snarls and snapping of bear and dogs, and each yelp was followed by an ominous decrease in the volume of the canine battle cries. There was a significance in this, that at last spurned the Captain to determined action.

"That fight 's got to be broke up tol'able quick," he exclaimed, "or Old Bolivar won't have so many dogs!"

He parted the laurels at a comparatively open spot on the edge of the swamp. Dragging his rifle by the butt, beating down bushes, and creeping and crawling under tangled roots and through networks of intertwining branches, he fought his way toward the scene of battle. Before he reached it the report of a rifle rang through the thicket, and a cloud of blue smoke floated up above the laurel tops, not more than a dozen yards beyond the spot where the conflict was still raging, but with lessened fury. Old Bolivar had struggled to a point where a glimpse of the bear was possible, and he had sent a ball crashing into the spot. A howl of pain and a heavy fall in the laurels followed the shot. Old Bolivar's bullet had gone home, but its work was not complete, for a second or two later bruin was on his feet, and once more threshing his way through the thicket toward the open, hurrying to escape his new and unexpected foe. As the bear crashed onward, Capt. Bodine straightened himself in the laurels, and guided in his aim by the swaying and cracking bushes, duplicated Old Bolivar's shot. Again the bear fell heavily in the laurels, and again arose and stormed ahead, followed by another bullet from the Captain's gun. The next moment bruin's huge, shaggy form broke from the thicket. Nigger, Old Bolivar's gamest dog, was alone on the bear's trail, and came out limping and bleeding, close on bruin's heels. The bear turned and made an effort to rise on his haunches. Blood poured from his mouth in a stream and dyed his black coat red. He staggered, recovered himself for a second, and then, bullet riddled and torn by the dogs, fell in a heap on the ground, and the dog, covered with wounds the bear had inflicted, sniffed and growled at the blood-stained carcass.

Capt. Bodine struggled back from the swamp, and, making a quick examination of the bear's head, swung his old fur cap, and gave tongue to a yell of triumph that filled the woods a quarter of a mile around.

"Hi! Bolivar!" he shouted. "It's Jaggers's b'ar! It's Ol' One Ear, sure's yer livin'! Or ain't yer living', in thar?"

"Yas, I'm a-livin'!" Old Bolivar yelled back. "I'm a-livin', but three o' my dogs hain't. They'm tore an' scattered 'roun' here like sassige meat. Here's Maje an' Tige an' Young Cobbler chawed to shoe strings. D——n Jaggers's b'ar? What's Nigger? Is Nigger out thar?"

"Part of him is!" replied the Captain.

When Old Bolivar emerged from the thicket, tattered and bleeding from contact with the obstinate brush, his only remaining dog limped away to meet him.

"Hi! Nigger, ol' boy!" said he. "Couldn't down you, could he? Is it sure Jaggers's b'ar, Cap?"

"Look at his one ear!" exclaimed the Captain. "Hain't no other b'ar a-carryin' only one ear 'roun' these woods, is th'?"

"Hope not," said Old Bolivar. "My dogs has got away with many a b'ar with two ears, an' now to think that three on 'em sh'd hef to lay down in the swamp muck an' give up the ghost fer a sheep-stealin' b'ar with only one!" And Old Bolivar kicked the carcass savagely.

"But ye must 'member 't this is Jaggers's b'ar!" argued the Captain. "He had a grievance, he did! If some mule driver 'd slip in an' slice your ear off, would you stop at knockin' over two or three dogs a gittin' even?"

"Dunno ez I would," said Old Bolivar; and the two hunters lugged the carcass of the famous bear into the settlement, where the rejoicing over the fall of Old One Ear was so great that work was stopped at the tannery for two days, and the whole country round joined in the festivities.

BAIT FOR BRITISH CASH.

HOW NORTH CAROLINA NATIVES GATHER GOLD ON THE HILL SIDES.

English Financiers Selling Stock in a Company to Work a "Reef of Gold" in Sam Christian Mountain—California Outdone.

The advertising columns of the leading London papers of recent dates give interesting, if not valuable, evidence of the immense undeveloped resources of this country and the vast mines of wealth still remaining to be opened up by American enterprise in the region of the British pocketbook. It takes a column of the finest advertising type to reveal to the English investor the gigantic opportunities of the "Sam Christian Gold Hydraulic (limited)," an English company that is just aching to scatter wealth broadcast by letting the investing public buy 33,000 shares of a total of 200,000 of stock at one pound per share, payable in five shilling installments. The officers are all English, and apparently are all in England, except E. B. C. Hambley, Esq., M. E., engineer and managing director, who is in this country.

The prospectus sets forth under the head of "Financial Facts," that the company was organized last fall when the directors chipped in enough cash to "acquire the Sam Christian Alluvial Gold Mine, comprising about 1,350 acres in Montgomery county, North Carolina." There was also subscribed in the same way, it is said, $35,000 of "working capital."

The description of "the property" is a particularly pleasing portion of the prospectus. The picture of the simple, pastoral tar-heel peasant and his family going out after every storm to gather gold on the mountain side presents an aspect of rural life in America that cannot but charm the average British mind, accustomed to the fierce struggle for wealth in the money centres of England and Europe. The advertisement says:

"The Sam Christian Hill extends across the whole property, and for many years past after every rainstorm it has been visited by the near residents to pick up the nuggets of gold washed down in the gullies and ravines on either side of the hill. The country is, however, very sparsely populated, and no regular system of mining has been carried on, owing to the absence of water, which this company is organized to provide. Nearly the whole of the country is covered by a valuable alluvial deposit, of which only an infinitesimal portion has been worked by the old washers, who pursued a method of sinking pits and washing the gravel in small streams in rockers. Both sides of the hill are rich in alluvial gold, and also in the quartz gold, which is washed down by the storms. The gold quartz from the gullies is probably the richest ever found. Samples of it were for several months on exhibition at the offices of the company, the value of which was estimated at the rate of about £50,000 per ton. The fact of both sides of the hill yielding quartz gold of great richness goes far to substantiate the belief that in the centre of this hill exists a rich reef of gold. This, however, can only be demonstrated by running a tunnel through the hill, or by washing down the sides of it. The latter course is the most desirable, as it will yield large profits from the alluvial gold, and eventually disclose such veins as may exist within the mountain."

Coming down from these pleasing generalizations to cold and "practical" details as to the methods by which this North Carolina "reef of gold" is to be broken up into sections small enough to go into a British pocket, the advertisement says that "... Hambley has personally tested the value of the auriferous deposits existing over the 1,350 acres, and became so convinced of the immense value of the mine that he has abandoned his other very lucrative employment to devote himself exclusively to the management of the Sam Christian Gold Hydraulic under an agreement with the company. Mr. Hambley erred on the side of prudence when he estimated that the Sam Christian alluvial would average 25 cents of gold per cubic yard; but even this yield is considerably in excess of the celebrated California mines." And this is backed up by quotations from various letters from Mr. Hambley giving yields varying from 50 cents to $3 a cubic yard from his tests, ending with one dated Feb. 14, 1888, in which he says: "For four successive days we washed virgin gravel, which yielded by constant tests from $2 to $4 per cubic yard."

It is further stated that "favorable reports have also been made by Mr. T. W. Brooks of California, Mr. N. S. Higgins of North Carolina, Mr. G. B. Hanna of the United States Mint, and Mr. Burchard, Director of the United States Mint."

After this it seems almost unnecessary to have added: "It may therefore be stated with confidence that the value of the Sam Christian Hill as an alluvial mine, apart from the almost certainty of its containing rich quartz veins also, is placed beyond the possibility of doubt; and the only thing necessary is to bring water there in sufficient quantities for hydraulicking. This is a mere question of money."

The explanation of the reasons which induce incorporators to peddle this "reef of gold" out to a fortunate British public in £1 shares, instead of keeping it all themselves, is somewhat involved, but it is clear that the incorporators have paid for the property and all the expenses of its development out of their own pockets, and are now only inviting the public in to furnish the "working capital"—probably to pay the freight on the gold and the other expenses of getting it to the British packet. It is mentioned that the company has no liabilities worthy of account, except a couple of last year's contracts, and quite incidentally it is added:

"There are, of course, others, as the company is now in active work, and subscribers for shares shall be deemed to have waived all claim to have them specified in detail within the meaning of section 38 of the Companies' act, 1867."

Lest foolish timidity should deter any investor from availing himself of this opportunity to revel in gold sliced, like cheese, out of the Sam Christian "reef," it is further stated that 50,000 full paid shares have been handed over to a trustee, who is to hold them until they have reached £4 per share, or over, and then sell them, and divide the proceeds among the holders of the other 150,000 shares. Each investor is, therefore, absolutely certain, even if not a single grain of gold is ever taken out of the mines, to get his money back—if he waits until the stock goes to £3. It seems really to be almost an association to relieve indigent investors, instead of a regular business company.

A SUN reporter showed the company's advertisement to a man well acquainted with North Carolina gold-seeking enterprises. A tear came into the man's off eye as he read, and his voice breaking, he said:

"Now isn't that too bad? A friend of mine has just come back, after three years spent in hunting for Carolina gold. He got his wages, but that's more than the company that hired him ever did. I don't doubt that he was all over this same Sam Christian Hill, but I suppose it hadn't been raining when he was there and the natives weren't out picking gold, so he missed it. It just shows how careful you must be in such matters. I shall make a memorandum at once never to hunt gold in North Carolina except when it's raining.

"This English company's a great scheme, there's no doubt of it. The only weak spot I can see is that no provision seems to have been made for indemnifying the natives in case they sue for damages through interference with their time-honored custom of gathering gold on the hill sides. I really think the company ought to make some provision for that before they begin to remove the reef.

"Seriously, there is a heap of gold in the mountains in North Carolina and in Georgia and Virginia and Pennsylvania and New Jersey, and like enough in England, too, but if there's enough of it in any of those places to pay the expense of extracting it, several generations of American prospectors have failed to discover its precise location."

Force of Habit.

From Life.

Old lady (to railroad brakeman)—How soon does this train start for Shackusek?

Brakeman—Not for two hours yet, madam. Step lively, please.